

# **FRANKFORD**

- water pollution  
control plant
- water supply system

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ONTARIO WATER RESOURCES COMMISSION

Division of Plant Operations



ONTARIO WATER RESOURCES COMMISSION  
OFFICE OF THE GENERAL MANAGER

Members of the Frankford Local Advisory Committee,  
Village of Frankford.

Gentlemen:

We are happy to present you with the 1967 Operating Summary for the Frankford Water Pollution Control Plant and Water Supply System, OWRC Project Nos. 2-0009-57 and 6-0002-57.

Your co-operation with our staff throughout the year has been appreciated. Only with such co-operation can the war against water pollution be waged effectively.

Yours very truly,

A handwritten signature in dark ink, appearing to read "D. S. Caverly".

D. S. Caverly,  
General Manager.





ONTARIO WATER RESOURCES COMMISSION

801 BAY STREET

TORONTO 5

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VICE-CHAIRMAN

D. S. CAVERLY  
GENERAL MANAGER

W. S. MACDONNELL  
COMMISSION SECRETARY

General Manager,  
Ontario Water Resources Commission.

Dear Sir:

I am pleased to submit to you the 1967 Operating Summary for the Frankford Water Pollution Control Plant and Water Supply System, OWRC Project Nos. 2-0009-57 and 6-0002-57.

The summary reviews progress during the year, outlines operating problems encountered and summarizes in graphs, charts and tables all significant flow and cost data.

Yours very truly,

A handwritten signature in cursive script, reading "D. A. McTavish".

D. A. McTavish, P. Eng.,  
Director,  
Division of Plant Operations.

## **FOREWORD**

● This operating summary has been prepared in order to acquaint readers with the management of the project during 1967. The efficiency of the plant's operation is reflected in a general review. Significant financial details are recorded, and technical performance is illustrated by graphs and charts.

The summary should answer two salient questions. Are the project's facilities adequate at this time? And can the project meet future requirements?

The Regional Operations Engineer is primarily responsible for the preparation of the report, and will be pleased to answer any questions regarding it.

Most of the material for the graphs and charts was compiled by the statistics section of the Division of Plant Operations, with the final versions of the graphs being drawn by the draughting section of the Division of Sanitary Engineering. Cost data were provided by the Division of Finance.

It will be evident from the report that all of these groups co-operated with substantial success.

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**FRANKFORD**  
**water pollution control plant**  
**and**  
**water supply system**

operated for

THE VILLAGE OF FRANKFORD

by the

ONTARIO WATER RESOURCES COMMISSION

---

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DIVISION OF PLANT OPERATIONS

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Assistant Director: C. W. Perry  
Regional Supervisor: P. J. Osmond  
Operations Engineer: J. N. Dick

801 Bay Street Toronto 5



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# '67 REVIEW

## SEWAGE SYSTEM

The total operating cost for the sewage system for 1967 was \$6027.80. The operating costs increased approximately \$400 over 1966 because of increases in salary and power expenditures.

The average concentrations of BOD and SS in the influent were 210 ppm and 150 ppm respectively. The concentrations of BOD and SS in the effluent were 32 and 22 ppm respectively. The percent reduction in BOD was 85.2 and the percent reduction in SS was 85.5.

Plans were finalized for the construction of new chlorine facilities to meet Department of Labour regulations. The new chlorine room will be constructed in the spring of 1968.

No major problems were experienced with the Frankford Water Pollution Control plant in 1967; however in August basement flooding was experienced on King Street.

## WATER SYSTEM

The total operating cost for the water system was \$1877.25 or \$60.60 per million gallons of water used by the Village.

The Frankford Water System ran extremely well during 1967 and no major problems or breakdowns occurred.

## PROJECT COSTS

2-0009-57

NET CAPITAL COST (Estimated)	\$162,062.20
DEDUCT - Payments from Municipalities	<u>4,899.45</u>
Long Term Debt to OWRC	<u>\$157,162.75</u>
Debt Retirement Balance at Credit (Sinking Fund) December 31, 1967	\$ <u>26,876.96</u>
Debt Retirement	\$ 3,172.00
Reserve	798.40
Interest Charged	8,862.93
Net Operating	<u>6,027.80</u>
TOTAL	\$ <u>18,861.13</u>

### RESERVE ACCOUNT

Balance at January 1, 1967	\$ 5,262.00
Deposited by Municipality	798.40
Interest Earned	<u>315.53</u>
	\$ 6,375.93
Less Expenditures	<u>(156.97)</u>
Balance at December 31, 1967	\$ <u>6,218.96</u>



# MONTHLY OPERATING COSTS

2-0009-57

MONTH	TOTAL EXPENDITURE	PAYROLL	POWER	CHEMICAL	GENERAL SUPPLIES	EQUIPMENT	REPAIRS & MAINTENANCE	SUNDRY
JAN	423.12	275.17	43.95				104.00	
FEB	349.89	267.87	44.08					37.94
MARCH	684.66	450.15	45.17		25.98		127.76	35.60
APRIL	675.14	293.88	94.98	228.38	25.33			32.57
MAY	403.57	300.91	41.27		17.19	8.57		35.63
JUNE	842.92	285.25	40.13		20.02			497.52
JULY	394.11	275.57	35.46		25.22		21.71	36.15
AUG	331.25	275.57	32.44		12.69			10.55
SEPT	571.35	460.93	29.13		31.38			49.91
OCT	370.49	275.57	33.18		.17		28.20	33.37
NOV	538.81	297.35	42.72		38.35			160.39
DEC	442.49	275.57	37.30		20.67			108.95
TOTAL	6027.80	3733.79	519.81	228.38	217.00	8.57	281.67	1038.58

6-0002-57

NET CAPITAL COST (Estimated)  
Long Term Debt to OWRC

\$118,401.83

Debt Retirement Balance at Credit  
(Sinking Fund) December 31, 1967

\$ 19,905.25

Debt Retirement

\$ 2,410.00

Reserve

542.24

Interest Charged

6,733.47

Net Operating

1,887.25

TOTAL

\$ 11,572.96

RESERVE ACCOUNT

Balance at January 1, 1967

\$ 4,931.85

Deposited by Municipality

542.24

Interest Earned

291.50

\$ 5,765.59

Less Expenditures

-

Balance at December 31, 1967

\$ 5,765.59

# MONTHLY OPERATING COSTS

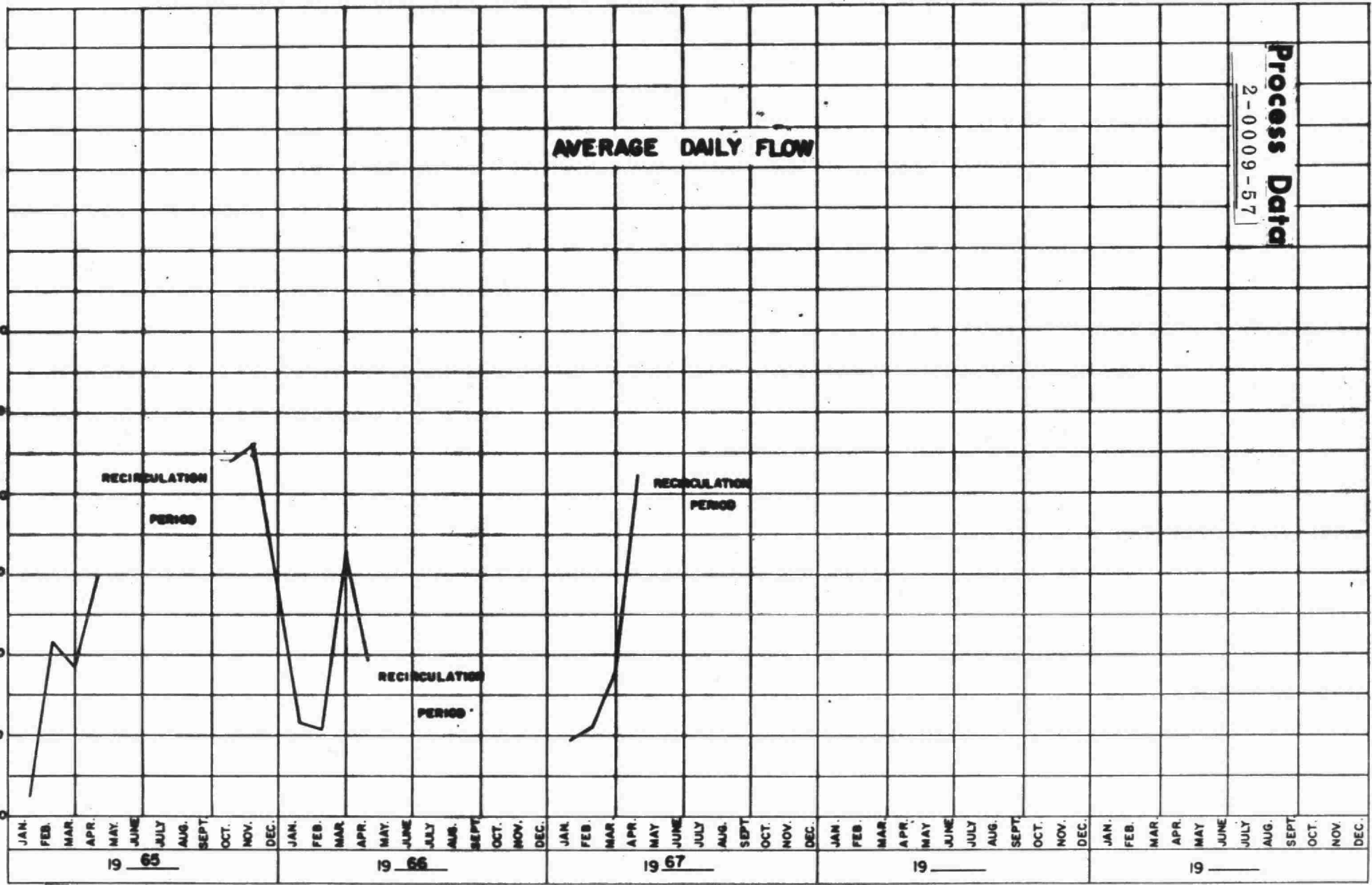
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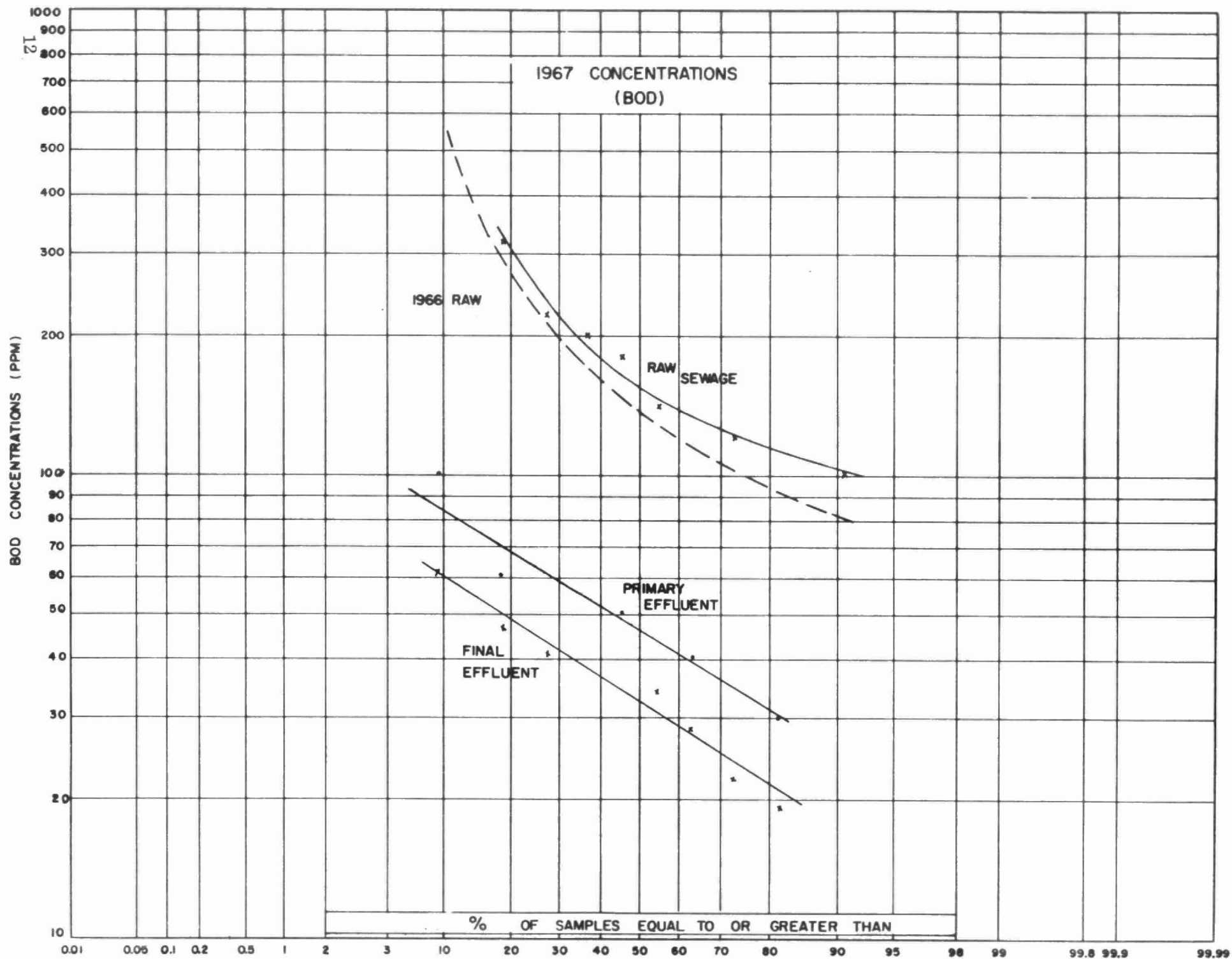
MONTH	TOTAL EXPENDITURE	PAYROLL	POWER	GENERAL SUPPLIES	REPAIRS & MAINTENANCE	SUNDRY
JAN	140.17	88.69	51.48			
FEB	140.09	86.22	53.87			
MARCH	213.91	147.02	55.18			11.71
APRIL	94.93	94.93				
MAY	139.56	98.11	41.45			
JUNE	172.96	92.92	43.69		36.35	
JULY	130.57	89.69	40.88			
AUG	153.84	89.69	41.15			23.00
SEPT	191.99	151.47	40.52			
OCT	158.70	89.69	41.60	27.41		
NOV	173.23	96.95	49.32			26.96
DEC	177.30	89.69	49.97			37.64
TOTAL	1887.25	1215.07	509.11	27.41	36.35	99.31

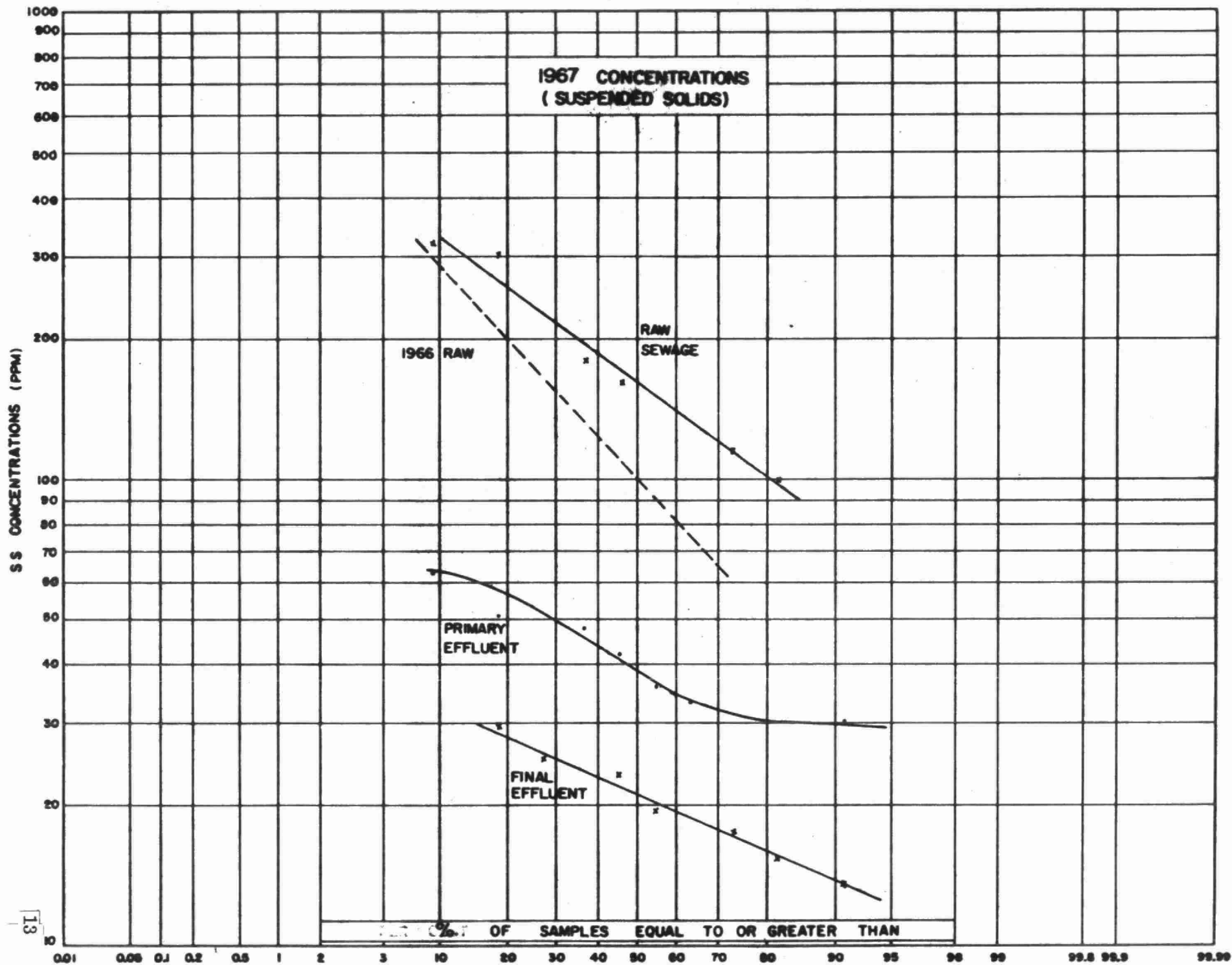
Process Data  
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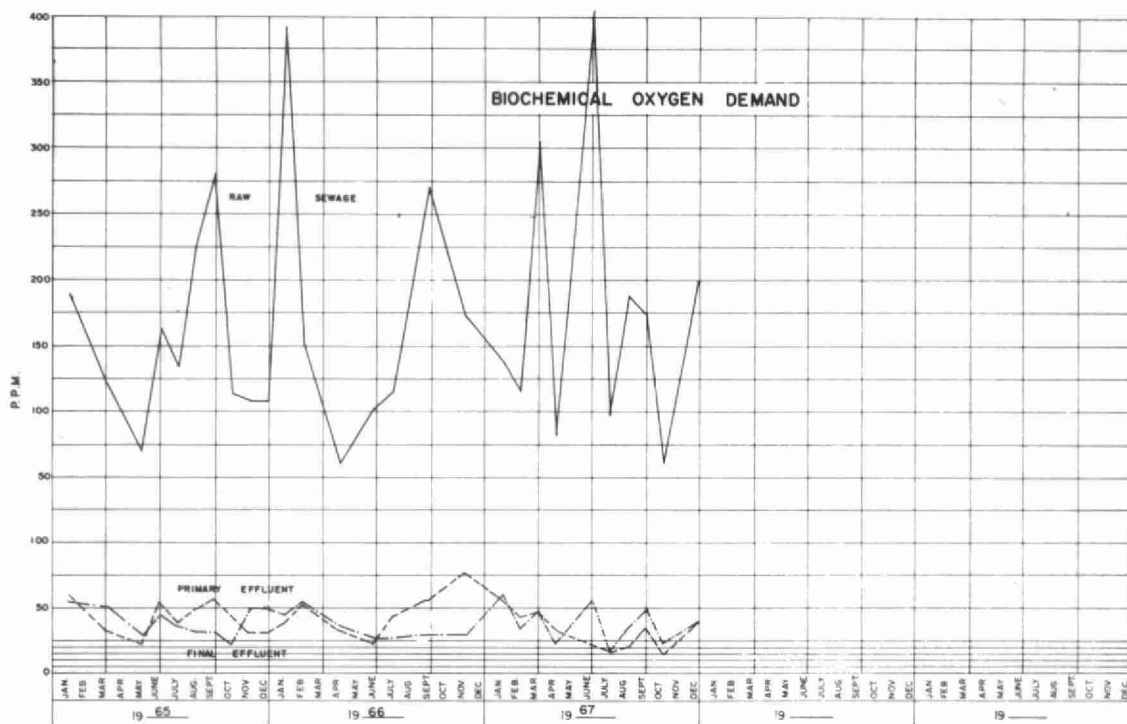
AVERAGE DAILY FLOW

M.G.D.

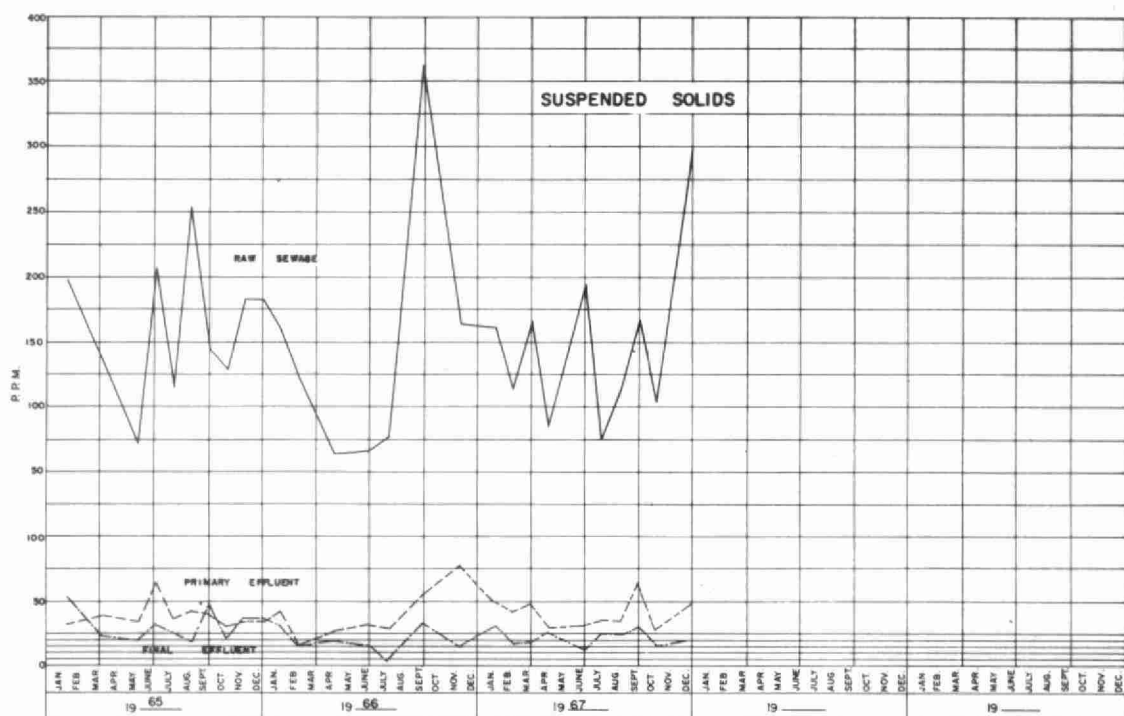








## MONTHLY VARIATIONS



## GRIT, B.O.D AND S.S. REMOVAL

MONTH	B. O. D.				S. S.				GRIT REMOVAL CU. FT.
	INFLUENT PPM.	EFFLUENT PPM.	% REDUCTION	TONS REMOVED	INFLUENT PPM.	EFFLUENT PPM.	% REDUCTION	TONS REMOVED	
JAN.	140	59	57.9	1.48	162	30	81.5	2.41	4
FEB.	118	34	71.2	1.44	114	17	85.1	1.67	5
MAR.	308	46	85.1	6.13	167	18	89.2	3.49	5
APR.	83	33	60.2	1.87	85	25	70.6	2.24	4
MAY	-	-	-	-	-	-	-	-	-
JUNE	712	22	96.9	-	198	12	93.9	-	5
JULY	99	17	82.8	-	75	24	68.0	-	3
AUG.	190	20	89.5	-	114	24	78.9	-	5
SEPT.	175	34	80.6	-	168	30	82.1	-	4
OCT.	62	15	75.8	-	105	16	84.9	-	4
NOV.	-	-	-	-	-	-	-	-	5
DEC.	210	40	80.9	-	316	20	93.7	-	4
TOTAL	-	-	-	52.59	-	-	-	37.82	52
AVG.	210	32	78.1	4.38	150	22	82.8	3.15	4

Loadings based on average daily flow of 0.162 mgd for non-recirculation period.

### COMMENTS

The concentration of BOD and SS in the treatment plant influent was 210 ppm and 150 ppm respectively. The concentration of BOD and SS in the plant effluent was 32 ppm and 22 ppm respectively. This resulted in a percent reduction in BOD of 85.2 percent and a percent reduction in SS of 85.5. The results were obtained from 10 eight-hour composite samples gathered at the Frankford Treatment plant and submitted to the Toronto Laboratory for analysis.

The total amount of grit removed from the waste at the treatment plant in 1967 was 52 cubic feet. This appears to be in line with the separate sewers that have been installed in the Village.



## CHLORINATION

MONTH	PLANT FLOW (MG)	POUNDS CHLORINE	DOSAGE RATE (PPM)
JANUARY	3.658	170	4.65
FEBRUARY	3.440	142	4.13
MARCH	4.680	154	3.29
APRIL	7.470	154	2.06
MAY	* 0.882	161	2.83
JUNE	-	151	-
JULY	-	157	-
AUGUST	-	156	-
SEPTEMBER	-	150	-
OCTOBER	-	157	-
NOVEMBER	-	152	-
DECEMBER	* 0.889	155	2.81
TOTAL	-	1859	-
AVERAGE	0.162	155	3.49

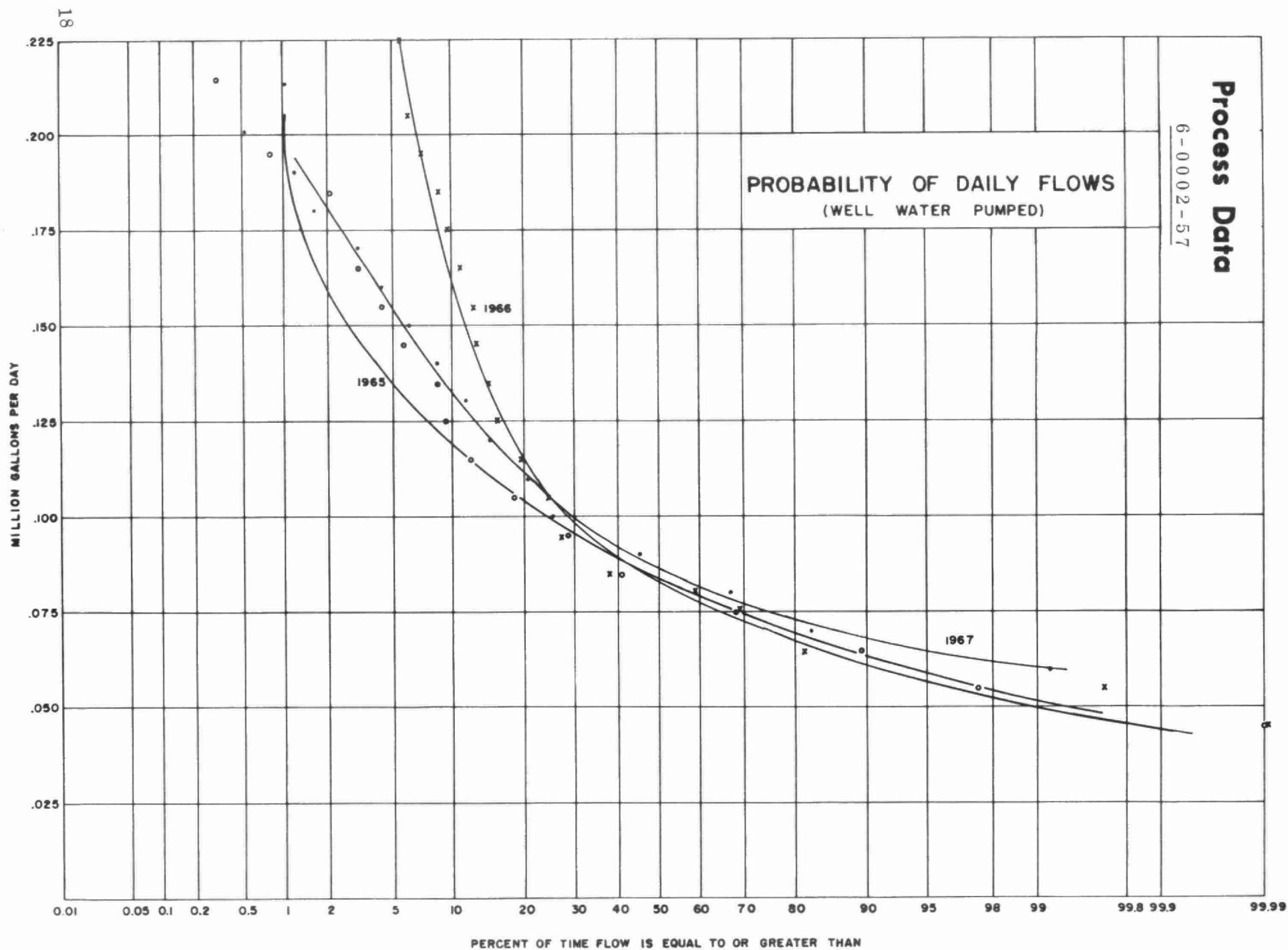
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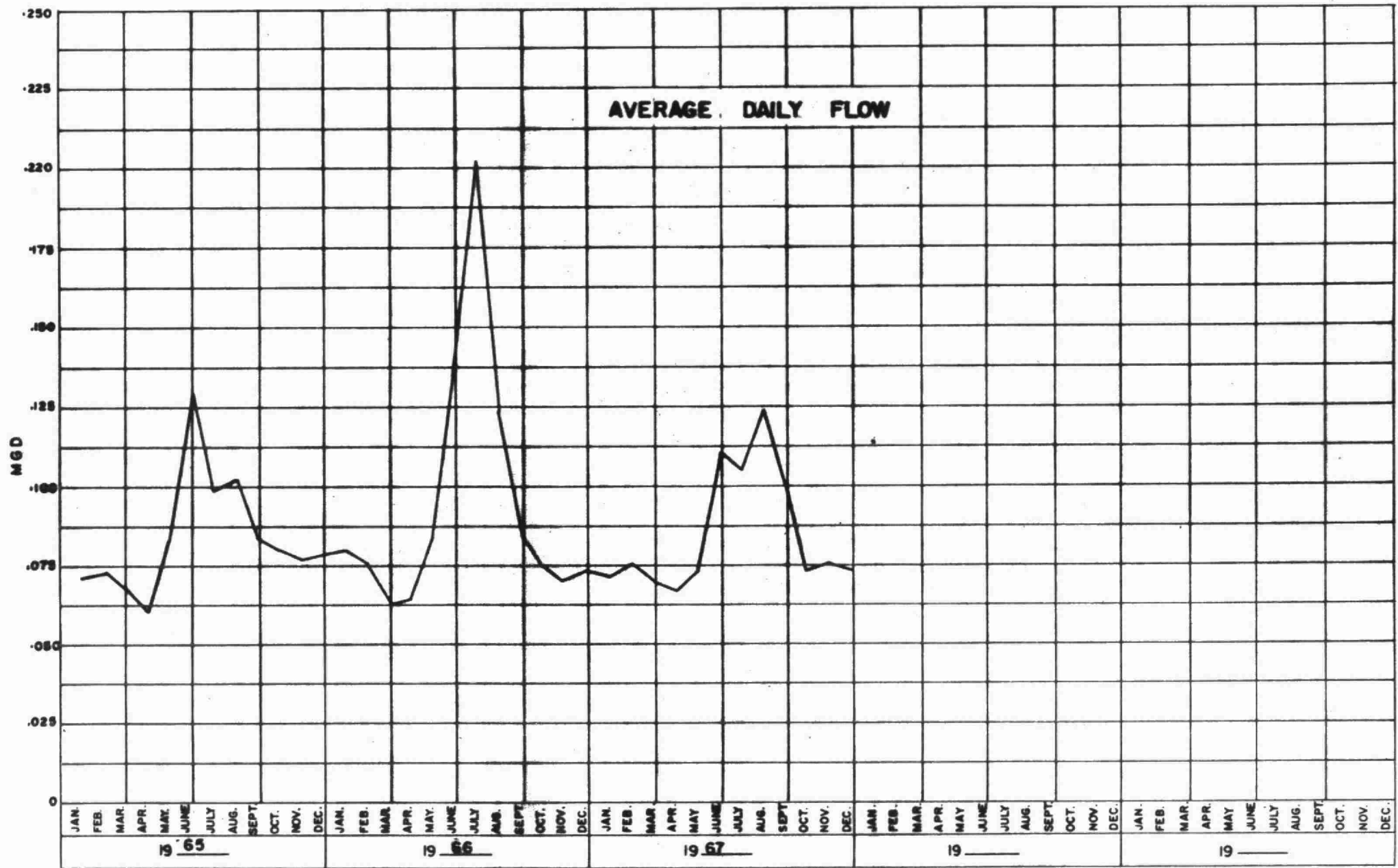
\*Recirculation commenced May 5 and was discontinued December 26.

Accurate flows are not available for this period.

### COMMENTS

The plant effluent is chlorinated continually for disinfection purposes. The effluent required 1859 pounds of chlorine to achieve the OWRC objective of 0.5 ppm after a 15 minute detention period.





MONTHLY FLOWS			
January	2. 191	July	3. 260
February	2. 091	August	3. 850
March	2. 125	September	3. 043
April	2. 003	October	2. 260
May	2. 263	November	2. 252
June	3. 320	December	2. 254
Total		30. 912	
Average		2. 576	

#### COMMENTS

The total quantity of well water pumped to the distribution system in 1967 was 30. 912 mg, a decrease of 3. 441 mg from 1966. The monthly average was 2. 576 mg and the daily average was 0. 085 mg.

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Ontario Water Resources Co  
Frankford water  
pollution control plant: asuu  
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